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I.

OBSERVATIONS ON A NEW VARIETY OF PERUVIAN BARK—WITH SOME REMARKS ON THE ALKALINE BASES QUINIA AND CINCHONA.

By GEORGE W. CARPENTER, of Philadelphia.

PERUVIAN bark is admitted to be one of the most valuable articles of the *materia medica*, and there is none in its catalogue which embraces so great a number of species, and in which there is so great a disparity in the medical qualities of each variety. Under these circumstances, it is peculiarly unfortunate, that the natural history and classification of *Cinchona* should be so enveloped in ambiguity, the nomenclature of the different species so very defective, and the various writers so discordant in their opinions, as to lead the student through a protracted, and too often fruitless investigation. The attention of our pharmacologists should be particularly directed to the article *Cinchona*, for the purpose of determining and agreeing upon a specific classification of those species which now occur in commerce, and to establish a nomenclature for them, by which each species and variety could be readily particularized, and at once understood by its name, which is at present impossible. In a preceding volume of

this Journal, I called the attention of the faculty to this subject, and described the several species of Peruvian bark, which then occurred in commerce, and made the description as accurately as possible from specimens before me. I then suggested as the most appropriate nomenclature, the names of the provinces of South America, from which the different species are collected, as *Calisaya*, *Loxa*, &c.,—appellations which have been so generally adopted, as to be the most familiar in the language of commerce. The terms *Calisaya*, *Loxa* and *Carthagera*, convey at once the idea of the particular kind of bark, and are perfectly understood, while the terms *Lancifolia* and *Cordifolia*, would involve an ambiguity as to what kind of bark was intended, inasmuch as several varieties of different qualities could come under the same term, and it would be impossible to understand which was intended; for example, the *Calisaya* and the *Carthagera* (the former the most superior, and the latter the most inferior species in commerce), being both yellow bark, would come under the denomination of *cordifolia*; hence, if *cordifolia* was ordered, it would be difficult to determine whether the *Carthagera* or *Calisaya* was intended, or some intermediate quality.

There has appeared, since my description of Peruvian bark in this

Journal, a species of *Cinchona* hitherto not observed in our market, and unnoticed by any of the writers on the subject.

Having devoted considerable attention to this valuable article of the *materia medica*, it is my purpose to furnish, from time to time, as in the present communication, descriptions of any species of Peruvian bark which may be added to those already in commerce, and which has not previously been noticed or understood. This bark, which has been denominated *Maracaibo*, has been imported in large quantities, and the importation is likely to be continued, so that we may calculate upon a regular supply of this bark. It comes from *Maracaibo* in bales containing generally from seventy to one hundred pounds; hence the name, above adopted, pursuing the arrangement of nomenclature from the locality, as observed in my former paper. This bark is much superior to the *Carthagena* or common bark as it is generally met with. It produces more than double the amount of saline matter, composed of cinchonine and quinine, and also a larger quantity of extractive matter than the latter; it is therefore, at least, of more than double the value. As this bark can be purchased at the same price, it will become an object in commerce, and it will be advantageous for the practitioner to be acquainted with its distinguishing characters, by which he could discriminate and recognise it among the different species and varieties of common bark.

It occurs in flat pieces which are short and broken, as if it were separated from the tree with difficulty, being mostly in pieces from one to three inches in length, and half

to one inch broad, and rather thinner than *Carthagena* bark. There are occasionally found small quills, the longitudinal edges folding together, forming tubes from one fourth to half an inch in diameter. It is of a deep yellow color; the epidermis, which is extremely thin, smooth, and of a light grey color, is generally removed from the bark. It may be distinguished from the *Carthagena* bark by being more compact, and breaking with a short and cleaner fracture, and more particularly by its taste, which is much more bitter; it is quite as strong a bitter as the *Loxa* bark, but has not the astringency of the latter. The internal layer is fibrous, but in a less degree than the *Carthagena*. This bark has appeared in our market only within a year or two, and as it will supply the place of a much inferior article, it is of high importance to the profession.

The quality of bark depends, no doubt, on the proportion of quinine and cinchonine which they respectively contain. The separation of these alkalies, therefore, affords a very valuable test to discover the qualities of different species of bark. Different barks, however, produce with acids different proportions of these two salts. Thus we find the *Calisaya* produces most quinine, the *Loxa* most cinchonine, and the red or oblongifolia yields both these salts in nearly equal proportions. What is their comparative value, is yet a subject of controversy: a considerable majority of practitioners, however, are in favor of the quinine, perhaps because most of them have not had an opportunity of employing the *cinchonine*. Dr. Paris goes so far as to state that cinchonine is only one fifth as active as quinine: others contend for the reverse. An interesting paper,

read before the Academy of Medicine at Paris, was published in the *Bulletin des Sciences Medicales* for November, 1825, in which M. Bally states that he has experimented upon the sulphate of cinchonine, with a view to determine its febrifuge qualities. He administered this sulphate in twenty-seven cases of intermittent fevers of different types, in doses of two grain pills, giving three or four in the interval of paroxysms, by which treatment he cured the disease as effectually, and as speedily, as with the quinine : of which twenty-seven cases, there were sixteen tertian, nine quotidian, and two quartan. He remarked further, that the cinchonine has properties less irritating than those of quinine, and that consequently its employment should be more general, and preferred in all simple cases. I believe few or no experiments have been made by the physicians of this country upon the medical properties of the cinchonine, and it must consequently be very little known to them from their own experience. It is most certainly a medicine which deserves, at least, a trial.

The sulphate of quinine, as generally termed, is not a perfectly neutral salt, being in the state of a sub-sulphate, and is only partly soluble in water. Its exhibition in this fluid is rendered much more eligible, by the addition of a drop of sulphuric acid to each grain of the salt, which makes a perfectly transparent solution, and which I think, from its obvious advantages, must entirely supersede the common formula of gum and sugar : a few grains of citric or tartaric acid will have the same effect as the sulphuric acid, in dissolving the quinine, and these acids have been preferred by some. Dr. Paris

states that he lately saw a prescription in which the salt was directed to be rubbed with a few grains of cream of tartar, and then to be dissolved in mint water. This, he continues, is obviously injudicious, since tartaric acid decomposes the sulphate and occasions an insoluble tartrate, which is precipitated. With deference to Dr. Paris, I would beg leave to differ, on the following grounds. The cream of tartar is objectionable, merely from the circumstance that the active part of the compound may be obtained in a more direct and speedy process by the tartaric acid. The combination of cream of tartar and sulphate of quinine, in the above prescription, does produce decomposition, as Dr. Paris has observed, but the virtue of the medicine is not in the least affected by it, and the precipitate, instead of being an insoluble tartrate of quinine, as he observes, is sulphate of potassa: tartrate of quinine is a very soluble salt, and is held in solution, while the water becomes slightly turbid, by the precipitation of sulphate of potassa, which, however, from its extremely minute division, is speedily taken up by the water, when you have a transparent solution of tartrate of quinine and sulphate of potassa, and as the latter answers neither a good nor a bad purpose, it of course can very conveniently be dispensed with ; and therefore, as before stated, the tartaric acid should be preferred, as having a more direct and speedy action.

The high price which the sulphate of quinine has always commanded, and the increasing demand which its reputation has constantly kept up, has been an inducement to fraud ; and it is much to be regretted that this valuable article of our materia medica, like others of

an expensive kind, has been mixed with foreign substances of inert character, for the base consideration of reducing the cost and enhancing the profit on its sale, and all this at the expense of the health of the suffering patient, to the disappointment of the practitioner, and not unfrequently to the injury of the reputation of the genuine medicine. It is of high importance, therefore, to be acquainted with the most efficient means of testing its character, where we have any doubt of its purity. The following are the distinctive characters and properties of the sulphate of quinine, and the most simple and effectual method of discovering fraud or adulteration in its composition.*

1. The sulphate of quinine must be soluble, at a moderate heat, in rectified alcohol; if it contains sulphate of lime, soda, potassa, or any other substance insoluble in alcohol, the adulteration will easily be detected.

2. It is soluble in acidulated water, say one drachm of sulphuric acid to an ounce of water, which will readily dissolve the quinine. By this means, if there is any stearine or margaric acid (substances prepared expressly for adulterating the article), they will float on the surface.

3. It should give, by sal ammoniac, a white precipitate, rather flaky, which is soluble in alcohol, and which, on being exposed to a gentle heat, will consume without leaving the least residuum.

4. After having dissolved it in acidulated water, it can be decomposed by a little sal ammoniac; it must then be filtered and evaporat-

ed. If sugar has been introduced into it, it will be easily detected by the taste or by fire, which will produce its peculiar odor.

5. If a white substance, insoluble in cold water, be found in the sulphate of quinine, heat the mixture to 170 deg. Fahr. This will render the starch soluble, and its presence may be determined by the addition of an aqueous solution of iodine, which will immediately occasion a blue color, and eventually a blue precipitate. The iodine must be added in very small quantities and very slowly, or the experiment will fail.*—*Amer. Journ. of Science and Arts.*

II.

ON THE SEAT OF THE SWELLINGS WHICH, IN THE LATTER STAGES OF FEVER, ARE USUALLY ATTRIBUTED TO INFLAMMATION OF THE PAROTID OR SUBMAXILLARY GLANDS.

Abstract of a Clinical Lecture lately delivered by Dr. Graves.

EVERY writer on the subject of fever has noticed the occurrence, in the last stages of that disease, of tumors which not unfrequently suppurate, and which all have considered as the consequence of inflammation in the glandular system; the parotid and submaxillary glands being the parts most frequently engaged. Four such cases have lately presented themselves to our observation—two with a favorable, two with a fatal result. The latter

* See observations, communicated by Dr. Faust, on the adulteration of quinine, bark, &c., Vol. XVIII., pp. 81, 84, of same Journal.—Ed.

* Specimens of all the species of Peruvian bark which now occur in commerce, neatly put up in bottles, with a full description of each and a treatise on Cinchona, can be had, for five dollars, at Geo. W. Carpenter's Chemical Warehouse, Philadelphia

afforded us an opportunity of examining the nature and seat of this affection, with the view of determining the correctness of the opinion generally entertained concerning these points.

According to the best authors, the parotid and submaxillary glands, towards the termination of fever, are liable to become painful, tender, and very considerably enlarged; and the tumor so formed is either a fatal symptom, or else, becoming the seat of a benign suppuration, proves salutary, or even critical. When of the former unfavorable character, they are said sometimes to attain to a considerable size in a very short space of time, and also to be liable to a disappearance equally rapid.

In our first case, the sudden appearance of the tumor was very remarkable; for, in the course of a few hours, two swellings had been formed, in their situation and general appearance resembling mumps of the largest size. They were so extremely tender that the patient screamed on their being touched even in the gentlest manner, and they were unattended by any cutaneous redness. Without producing any alleviation of the cerebral affection that constituted the predominant symptom of this poor man's fever, these swellings somewhat subsided before his death, which happened on the following day. Much curiosity was excited among the pupils, with regard to the nature of this local affection, and by many it was considered as arising from a sudden inflammation and tumefaction of both parotids; so exactly did the tumors, in extent and situation, resemble the mumps. Their hardness, it is true, was not so great as that usually observed in the latter disease, but this circum-

stance alone could not be relied on as a distinction. On examination, the parotids were found raised up by the tumors, but were not enlarged or otherwise altered in structure, except that their interstitial cellular tissue was, as it were, bathed in a reddish serous fluid, evidently the result of a violent inflammation of a peculiar character and short duration. The swellings were owing to the effusion of a similar fluid, which abounded most in the subcutaneous cellular membrane, while, in that which pervades the substance of the muscles, not only in the superficial, but in those more deeply seated, it was observed in lesser quantity. The intermuscular spaces were also occupied by this fluid in considerable abundance.

It may, perhaps, be said that these swellings were essentially different in their nature from the suppurating tumors observed in fever; but their identity is proved by the case of a young man named Connor, in whom swellings, in all respects precisely similar, arose six days previously to his death. The longer duration of the inflammatory process, of course, produced an alteration of structure somewhat different, but still evidently only an advanced stage of that just described, while it was also as evidently of the class of suppurating tumors. It is worthy of remark, that in Connor's case, the tumor on the right side, on the fourth day of its appearance, occupied exactly the same situation that is observed in the mumps, and had likewise the same degree of hardness; while that on the left side, which was only of two days standing at that period, was situated lower down, and was much less firm. These swellings subsided a good deal, a few hours before his death. The

cellular tissue in the parts before enumerated, was not infiltrated merely with bloody serum, as in the other tumors, but this serum was everywhere mixed with pus, and the cellular tissue itself had become dense and friable, and was of a reddish, or rather a flesh color. The parotid and submaxillary glands shared in this affection of the cellular tissue, and consequently contributed their proportion to the formation of the tumors; but they by no means constituted the whole of the swellings, or indeed anything like the greater portion of them.

A few days after Connor had been attacked, a similar swelling arose in a boy, named Byrne, who lay in the bed next to Connor; but it was confined to one side, and it occupied a position corresponding to the parotid, where it was most swollen: but in its less tumefied parts, it extended both further downwards and backwards. This tumor suppurated, and formed an abscess, which was apparently much more superficial than the great mass of the swelling, and unconnected with it; for when it was opened, and its contents were discharged, the hardness and swelling in the region of the parotid seemed undiminished. The abscess, however, continuing to discharge matter, this swelling gradually declined, and finally disappeared.

At this very time, a woman in the Fever wards was attacked with a similar swelling, but which was evidently neither in the situation of the parotid or submaxillary gland: it was confined to the subcutaneous tissue immediately below the ear, and was prevented from suppurating by the application of leeches.

The facts just stated are, I think, conclusive, in proving that the tumors hitherto supposed to arise

from inflammation of the parotid or submaxillary glands, and which in fever sometimes forebode death, and are sometimes the precursors of returning health, are not owing to an affection confined in its action to these glands; but, on the contrary, the inflammation and its consequent tumefaction are seated in the cellular membrane of all the neighboring parts: so that the bulk of the tumor is sometimes altogether, and generally, for the greatest part, made up independently of disease of these glands. It would be rash to extend this conclusion to the mumps, cynanche parotidea—but I may be permitted to remark that I am far from being satisfied that the structure of the tumors so called has not been assumed without sufficient grounds. Indeed, this disease so rarely, if ever, proves fatal while the swellings persist, that I do not know of any post-mortem examination of the tumors of mumps on record. Our only guide, therefore, is analogy; and when we recollect that our swellings agree with mumps, not only in general appearance and situation, but also in the sudden manner in which they arise, and, according to the testimony of authors, in the sudden manner in which they occasionally disappear; when we recollect, also, that, like mumps, they showed a decided tendency to be epidemic,—we cannot avoid conceding that the points of resemblance are strong: the more so, that in both diseases the sudden disappearance of the tumor is always dangerous. The sympathetic inflammation of the mammae in females, and of the testes in men, which not very unfrequently follows retrocession of the tumors in cynanche parotidea, may be objected to this analogy, and may be consi-

dered as proving the glandular nature of the swelling in mumps. On the other hand, we know of no other glands which are liable to become, in consequence of inflammation, so enormously enlarged in the course of a few hours, as the parotids (if that disease really depend on an affection of these glands alone); and, indeed, it may be observed, that acute inflammation seems, in all other glands, incapable of causing a degree of swelling at all comparable to that observed in mumps. The swelling, too, in other glands, is better defined and more circumscribed, and scarcely liable to the sudden retrocessions observed so frequently in cynanche parotideæ. It is a singular fact, that the salivary secretion is not notably altered in mumps, and yet were this disease dependent on inflammation of the parotids, a suppression, or at least some alteration, in the quantity or quality of that secretion, might be expected. Such are the ideas which have at the moment occurred to me concerning the pathology of these affections—ideas which I ventured to bring forward merely with a view of exciting further inquiry on the subject.

III.

OF THE UVA URSI IN NEPHRITIC CASES, &c.

For the Boston Medical and Surgical Journal.

MEDICAL practitioners seem to agree, that the Uva Ursi (which Linnæus makes a *Species* under his *Genus* *Arbutus*) abates the pains and shortens the fits of nephritic and calculous attacks; notwithstanding the best opinions are, that it has no power whatever as a *solvent* either of stone or gravel.

Hence doubts* have arisen how this fact can be explained; and the solution of this question seems connected with practice.

A short conjecture, therefore, shall be offered on this subject; namely, that the benefit arises from a power in the uva ursi to remove morbid action in the urinary organs; and that a healthy condition in these organs prevents the *aggravations* which might otherwise attend diseases belonging to the urinary system. Several *parallel cases* may be supposed to occur in medical practice. For example: an ophthalmia may be much relieved by the removal of particles of dirt accidentally lodged within the eyelids; and the member to which the prepuce is attached, may in like manner profit, if the prepuce be cleansed from foul matter collected underneath it. Perhaps it may strengthen our conjecture, if we add to it another *hypothesis*, founded on the conceived utility of *astringents* in the cases in question. The Swedes and Russians are said to use the uva ursi largely in tanning; which proves this article to contain much of the *tannin principle*; and if an affinity is thus found to exist in the uva ursi as to certain *dead* animal matter, the same affinity may be held to exist as to certain *living* animal matter; so as to yield to the patient the virtues of a very powerful astringent, supposing astringents to be useful in these cases.

This, it is true, is all conjecture and hypothesis, but it is at least not of an unnatural description. It also agrees with the fact of the reduction of the *pulse*, which *finally* occurs after taking the uva ursi;

* See the N. B. at the end, as to these doubts.

besides receiving some confirmation from the details of the following case, which has recently occurred, and which, in truth, has led the writer of this article to the present discussion.

An elderly person, occasionally attacked with gout, observed his urine to become suddenly and largely mixed with blood, and yet he experienced no pain whatever on the occasion, nor did he feel any while passing the urine; but when the stream issued along the urethra, it was stopped for a time, in each instance, by large clots of blood. The patient (who in general had good health, and had suffered nothing from strains or other violence) thought this not improbably owing to a gouty affection; and suffered it to proceed without much attempt to check it, during two whole days; notwithstanding the forebodings of some medical writers. The delay seemed to have its hazard lessened, as (from the absence of all local symptoms elsewhere) he judged that the discharge of the blood proceeded from vessels seated in the bladder. He employed, therefore, merely rest and abstinence for the moment, with an open body; and refrained from cordial liquors; using for a part of his drink, barley water in which gum arabic was dissolved. He had his views, nevertheless, constantly fixed on uva ursi, digitalis, *astringents*, and such other measures as the case might demand. After about forty-eight hours, however, he began to take moderately of the uva ursi, prepared by boiling half an ounce of the powdered leaves, for ten minutes, in a pint of water; each dose amounting nearly to a very small wineglassful. The result was, that in two or three days the urine became free from fresh blood; and nothing seemed

left behind but small clots of blood, with a little *fine gravel*, which again went off in about two days; the uva ursi being still, for a little time, continued.

Two or three days after this supposed cure, and after leaving off the uva ursi, the urine became what some have called *mucopurulent*. Upon a fresh resort, however, to the uva ursi, the urine became once more bright, and gravel was no longer to be seen in it.

As diet may be suspected to have had some concern here, we shall state the following particulars regarding the diet; what is not mentioned on this point having been conducted on principles of old established habits.—The patient, on the occurrence of slight *gouty* symptoms, had left off mild barreled cider (which he had been using with great moderation), and substituted weak brandy and water, for a part of his dinner beverage. But his urine becoming paler and rather more in quantity than usual, he returned to his cider. His urine in a few days becoming bloody, the cider was omitted, and, after this symptom abated, was replaced by a little "*stout*" beer, manufactured in London, which, though it seemed sound, abounded in loose *mephitic* air. This was drank during two days, and suddenly, during two days, the *mucopurulent* appearance in the urine occurred. On giving up the beer, and returning to the uva ursi, the urine soon again became clear. After drinking weak brandy and water, and weak wine and water, by turns, the use of beer and of cider has once more been introduced into the diet, as occasion served, in small quantities, without inconvenience. From this statement, we may suspect that the

bloody urine occurred from *incidental* causes, disconnected with diet; and that the muco-purulent appearance in the urine was solely owing to *pus* produced during the healing of ruptured bloodvessels, with which *mucus* mixed itself. Be this as it may, the uva ursi appears not to have been misplaced in either stage of the business; and the probable benefit of it will be farther confirmed by an important remark to be made hereafter.

But a new circumstance is now to be noticed. Dr. Thomas, in his *Modern Practice of Physic* (as edited in this country by Dr. Hosack), informs us, that "a case of *hæmaturia* is recorded (in the 8th Vol. of *Medical Facts and Observations*), which had resisted repeated bleedings and warm bathing, salivation, emetics of different kinds, camphor and opium in large doses, *uva ursi*, *mephitic* alkaline water, &c.; which was *quickly* and *effectually* removed by giving the patient a pint a day of decoction of *peach-leaves*. The decoction was made by boiling an ounce of dried leaves of the peach tree (*amygdala Persica* Linn.) in a quart of water, till it was reduced to a pint and a half." So far Dr. Thomas.—The patient, in the case above related, on this hint, joined about thirty drops of excellently *distilled* peach-water to his uva ursi, and thought he found the addition useful, but certainly not injurious.

We shall now conclude with some brief remarks.

1st. It seems improper to employ either uva ursi, or the peach leaf, beyond necessity; as it is not every medicine which can be made either habitual in the human system, or prophylactic. In the case of the gouty patient above detailed, no opium was requisite to allay

either pain or irritability, or to procure sleep; and it may be questioned, therefore, when opium has been given with the uva ursi, whether the opium was not called for by too liberal an employment of the uva ursi. And this leads to the following rule; namely, never to use the uva ursi except when wanted; but, when wanted, to adopt it fearlessly, as being possibly the only resource offering. A similar remark may be made as to the peach leaf; particularly as it is an article so acceptable to some, as to encourage them in taking more profuse and frequent doses of it than may be prudent.—2d. We ought, in every event, to employ the uva ursi while any clots of blood or particles of gravel remain to be removed; since these (as appeared with our gouty patient) seem readily got rid of under the use of the uva ursi. Were this use of it neglected, it might here happen (as in the case of *other* foreign bodies accidentally lodged in the bladder) that a coat of calculous matter might soon *surround* these substances with a small but regular mass of *stone*, which time might increase; and as the uva ursi *cannot be depended upon for dissolving* stone, this might produce serious evil. In this remark it is, that we find our encouragement for using the uva ursi, while anything improper remains in the bladder, which the uva ursi can seem likely to contribute to expel.—3d. Though we have supposed above, that the uva ursi only prevents an *aggravation* of symptoms, yet it may be queried whether a disordered state of the urinary organs may not sometimes of *itself* provoke nephritic or calculous attacks; and thus introduce these as *primary* affections.—We may now, lastly, pass on to the following

observation, but merely as a subject demanding farther inquiry. Some appear to have conceived that gout and calculous complaints have a species of relation to each other; not, indeed, a relation of *sympathies*, but a sort of *watchfulness over each other*, in order that both should not appear at the same time in the system. And this, indeed, is in some degree implied in the case of Dr. Barton, of Philadelphia, who is said to have had nephritic symptoms *alternating* with gout in his feet.—This is a hint which it may be useful sometimes to bear in mind; and it is repeated, that as such only it is offered.

On the whole, we may conclude, as to the *uva ursi*, that it is an important, if not an unrivaled resource in the hands of medical practitioners, in nephritic and calculous cases; as it is apparently, also, for keeping the urinary organs in a healthy condition: and if either, and still more if both, these positions be true, we must admit that its uses may be very essential, in certain cases, to the *whole human system*. With regard to peach leaves, we must wait the result of farther experience. *

N. B.—Whoever wishes to read a short statement of the *controversy* respecting the mode in which the *uva ursi* is supposed to act, in the cases referred to in the above observations, as also the authority for opium being occasionally added to the *uva ursi*, may consult Professor Bigelow's very instructive work on American Medical Botany. (See Article *Arbutus Uva Ursi*, Vol. 1, part 1, p. 66.)

MEDICAL JOURNAL.

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THE attention of subscribers is respectfully requested to the notice of the Publishers on the last page of this number. As the gentlemen who have undertaken the publication of this work are anxious to consult the convenience of its patrons and of the profession at large, we hope the Faculty will not be slow in expressing their wants, or in rewarding the generous efforts which are made to gratify them.

PRODUCTION OF WORMS.

IN view of the opposing difficulties presented by the doctrines we have mentioned, the author of a late article in a foreign periodical takes a middle course, and advances a view of this subject which at least appears to possess the somewhat rare merit of being *something new*. He regards the production of intestinal worms as independent of extrinsic causes, but as dependent on the vital energy belonging to the part in which they are found. Varying and limiting the axiom above alluded to, he takes as his principle "*omne vivum a vivo*;" and considers these ungrateful tenants as the result of the same morbid vitality which produces the various and frightful forms of internal and external tumors—which feeds the fatal fungus, and nourishes the corroding cancer. Life is therefore generated and sustained in the stomach, because the stomach is a vital part; nor is it more extraordinary

that it should be so, than that the uterus, having received into its cavity the germ of a future being, should contribute of its own circulation to supply its vessels, and of its own vigor to maintain its expanding energies.

That we may not be accused of injustice to this theory, we will state it in the author's own words:—"It is not maintained that entozoa are produced from the fluids found in the intestinal tube or in the tissue of organs; but that their germs are formed by some aberration of nutrition, in a manner similar to that in which other new formations originate, and that this germ becomes endowed with an independent vitality, and is evolved into a worm."

Pleasing as this theory appears on a first view, and supported as it is, by its author, with much variety and beauty of illustration, it will, we fear, be found, on examination, to be but little more than a new statement of that doctrine of equivocal generation, which it appears to have been a leading object of the writer to condemn. In truth, the analogy which he finds between the growth of entozoa and the production of the various excrescences alluded to, does not in reality exist. In the first place, all these latter proceed by the addition of matter more or less similar to that of which the part which forms the seat of disease previously consisted; the changes which take place are gradual, and never constitute so wide a difference as that which is found between the animals in question and the place of their habitation. Secondly, these parts,

though in some sense possessing life, possess, of course, no independent existence, and cannot be supposed to communicate that animal life, of which, in fact, they are themselves destitute. The case of the uterus, which confessedly presents some analogy in this respect, is so widely different in others, as hardly to afford more than a mere illustration of the idea proposed. In this case, the organ is expressly constituted for the purpose of reproduction. An ovum is actually conveyed; and the product follows, with some unimportant varieties, a uniform type. Thirdly, the connection between the stomach and the entozoa, is not that of a common circulation. Fourthly, the production of worms cannot, with any propriety, be regarded as an effect of vital energy similar to that which produces tumors in other parts. If this principle were a correct one, we should find entozoa growing in similar situations, and even accompanying the development of these tumors. So far as we are able to judge from other circumstances, the vital energy of the stomach in which these animals are found, is always less than that of the organ in its healthy state. To conclude, therefore, from the phenomena presented us in the growth of these animals, that their vitality is in any proper sense derived from that of the system, seems an inference wholly unauthorized by facts. That the secretions of the intestinal canal, under certain diseased states, form the principal, if not the only nidus in which these ova can come to maturity, is beyond dispute; but from what source these

rudiments are themselves derived, is a question to which time and the labors of future physiologists have yet to render a satisfactory answer.

PERIODICAL CHARACTER OF DISEASE.

THE tendency of certain forms of disease to recur at fixed periods, appears to have been among the earliest observations made in medicine, and it is one which the experience of all later times has served to confirm. The various types of intermittent fever were well known to Hippocrates, who recognises the tertian and quartan ague, and points out the critical days in continued fever, with an accuracy which modern observation has not been able to surpass. The phenomena which take place in health, are, many of them, such as to indicate a similar tendency. To this may be referred the physical effects of what is usually termed the power of habit. The wants we are accustomed to indulge at certain times, will, at those times, also become the most urgent. Certain evacuations have naturally a periodical recurrence; and others may be made to adopt it by very simple means. Nor are the morbid processes which are subject to this law, such alone as are of a febrile character. Many diseases of the nervous class, such as hysteria, epilepsy, and others, affect regular periods of return, and often recur with remarkable regularity.

This periodicity in disease, if it may be so called, has been supposed to be, for the most part, limited to affections in which functional de-

rangement alone occurred, and not to extend to those essentially accompanied with change of structure. Both experience and reasoning, indeed, seem to lead to this conclusion. On the one hand, it seems easier to account for these sudden transitions from disturbance and suffering to health and ease, on the supposition that some of the functions alone are disturbed, and again recur to their usual state. On the other hand, this peculiarity has been found to attach principally to fever, which, by former pathologists, at least, was limited to a derangement of the functions, and was not, until lately, regarded as a structural disease.

Within a few years, however, a considerable change of opinion on this point has been brought about by the popular doctrine of Broussais. This doctrine, as is well known, regards fever in the light of an inflammatory affection of the stomach, a true gastro-enteritis. Whatever may be thought of the correctness of this view, it is certain that it numbers among its partisans not a few of the practitioners both of Europe and this country. One of the effects of its prevalence has been, to direct the attention of observers to a class of diseases hitherto regarded as scarce more than anomalies, but now found to be of frequent occurrence—namely, periodical inflammations. That such affections actually exist, is a fact as well attested as it is curious. In truth, they occur in organs which, being exposed to direct observation, leave no room for error on this point. We have had very recently described to us, a case of ophthalmia recur-

ring daily in paroxysms of from two to three hours, during which time the conjunctiva presented every mark of severe inflammation. The case was treated with sulphate of quinine given in the intervals, under which the daily appearance of the paroxysm was delayed, and the disease disappeared within a few days. We have now before us the account of a case of intermittent diarrhœa, which the author, M. Gaultier de Claubry, a true disciple of Broussais, terms a *fevre intermittente perniciouse diarrhéique*, and which was cured in the same manner. M. de Claubry advances the idea, that in cases of this kind, the lesion or structural derangement does not entirely cease with the more obvious symptoms, but continues through the intermission, and, being augmented at each paroxysm, will at length convert the general disease into continued fever, and the local affection into permanent inflammation. Under these circumstances, if the part affected be an important one, the disease must, if left to itself, tend to a fatal termination. However this may be, we cannot but regard the subject of intermittent affections generally, and especially of those accompanied with these changes, as among the most curious and interesting topics within the domain of pathology.

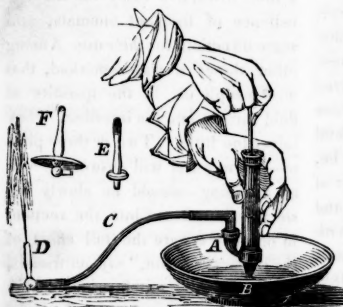
AN IMPROVED AND HIGHLY USEFUL DOMESTIC INSTRUMENT.

THE French people are remarkable for the vigor and vivacity of their old age. This is owing partly to natural disposition fostered by example, habit, and association, partly

to the beauty of their climate, and greatly to the care they take to promote free and regular evacuations from the skin and the intestines. Warm baths and *lavements* come in the daily routine of a large proportion of the citizens of France. Their climate we cannot make our own; like dispositions are the inheritance of few; but the baths and enemata—the chief among the M'Gregors—they are at the command of us all, and any invention which will render their administration more easy and agreeable, will tend to make more common their proper and habitual use. It is in this view we regard a recent invention of an English mechanic, as an important step in the prevention of disease, and the preservation of the health of the community.

Six or seven months ago, we gave a short discursive essay on the excellence of frequent enemata, and some directions for their use. Among other things it was remarked, that most people err in the quantity of fluid thrown into the intestine. They inject too little. Two or three pints of—warm water will answer as well as anything—should be slowly but steadily introduced into the rectum, in order to ensure the full effect of the remedy. "But," say our friends, "this requires an instrument too large and clumsy—we prefer less, and will make up the difference by adding salt, oil, or molasses." Below may be seen an answer to this argument; and when it is remembered that the effect produced depends on the degree to which the intestine is distended, the excellence of this apparatus will be appreciated.

It consists of a small syringe, flexible tube, two ivory pipes, two ivory mounts, and a wooden supporter, all closely packed in a box about half the size of a common brick. When used, one end of the flexible tube, C, is to be attached to the side branch, A, of the syringe; and at the other end, one of the straight ivory pipes, D, is to be screwed into the globular mount of ivory. This pipe is to be introduced into the rectum, and the person seated in a chair;—in another chair, in front, place a basin of warm water, into which the lower end of the syringe is to be introduced to the bottom. By working the piston, any desired quantity of the fluid may be slowly and steadily thrown into the intestine. The machine may be adjusted for self-administration, or the aid of an assistant.



Among the peculiar advantages of this invention of Mr. Maw, are its portableness and little liability to get out of order. It may be carried in the coat pocket without inconvenience, and will be an invaluable companion to the invalid traveller. By a very slight alteration, which

it will shortly receive, without doubt, from the ingenuity of some of our machinists, it may be used as a stomach-pump, as well as an injecting syringe. Another great advantage of this apparatus, and one which will come to the mind of the practitioner with peculiar force, is this:—By lengthening the tube, he may himself administer enemata to the sick, without embarrassment on either side. The pipe having been properly introduced by a friend of the patient, the physician may manage the pump at a distance from the bed, and carry the operation to any extent he may judge expedient.—Several of these instruments have been imported, and are for sale by Mr. E. Wight, Apothecary, in Milk Street.

NEW MEDICAL DEGREE.

It appears that the new Charter of the London University authorizes the conferring a degree, we presume honorary, in medicine, under the title of Master of Medicine and Surgery. Such honors are apt to be bestowed on favorites and personal friends, rather than on those who most richly deserve them. Some lamentable instances of such abuse of power, for such it truly is, led us early to regard the existence of these degrees as injurious to the best interests of the profession and of society. We call to mind at this moment an example, in a neighboring state, where, of two physicians practising in the same town, one, an illiterate ordinary man, and an equally bad practitioner—and the other

profoundly versed and eminently skilled in medicine, the former received an *honorary* degree of Doctor of Medicine, and the latter was, and has been to this day, wholly overlooked by the sage dispensers of the literary and scientific loaves. And why? Simply because the former was a democrat, and a political and personal friend of some of the rulers of the land and its literary institution, whilst the latter was devoted to his professional avocations, which were numerous, and to the improvement of medical science; cultivated his own mind, and not the friendship of those in power—attended to his own business, and not to the veerings of the popular vane.

SINGULAR EFFECTS OF FEAR.

The following facts are related by Mr. Young in the *Edinburgh Geographical Journal*.—A blackbird had been surprised in a cage by a cat. When it was relieved, it was found lying on its back. Its feathers fell off and were renewed, but the new ones were perfectly white.—A grey linnet happened to raise its feathers at a man who was drunk: he instantly tore the creature from its cage, and plucked off all its feathers. The poor animal survived the accident (the outrage we would rather say), and had his feathers replaced, but they were also white.

To these we would add the case of a gentleman who was in the Lunatic Asylum at Glasgow a few years ago, who had his intellect impaired, and his hair turned suddenly grey, by a paroxysm of fear.

MARRIAGES REVOCABLE BY THE LAW OF ENGLAND.

INSTANCES of females being married so early as fourteen years of age are not extremely uncommon in this country, and it is said a female child of twelve, was recently married in England. By the law of that country, there is no period too early for marriage: infant females have been entitled to dower at the early age of nine years. The only limitation is, that males may dissent to a previous marriage when they are at the age of fourteen, and females at twelve; but a marriage after they attain these ages is irrevocable; and a marriage is good for all purposes if made within these ages, if not dissented from at the time of the male party attaining fourteen and the female twelve. Such early marriages were very common formerly, but are rare now.

HIGH WIND.

DURING the gale in the early part of the present month, a woman in this city found her muscular power insufficient to resist the force of the wind, and was blown down in such a manner against the curb stone, as to fracture several ribs of her right side. The lung and liver were so severely injured that she died of the wound, about ten days ago.

ERRATUM.

IN our last number, p. 158, in the two last lines of the second column of the article on *Rigors*, for "must act upon the other, as well as," read "may."

Whole number of deaths in Boston the week ending April 22d, 24. Males, 10—Females, 11. Stillborn, 3.

Of consumption, 5—infantile, 1—unknown, 2—lung fever, 1—croup, 3—cancer, 1—paralysis, 1—sudden, 1—childbed, 1—fits, 1—dropsy in the chest, 1—dysentery, 1—liver complaint, 1—scarlet fever, 1.

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TO THE MEMBERS OF THE MEDICAL PROFESSION.

THE publishers of the Boston Medical and Surgical Journal, desirous of rendering this publication acceptable in every respect to its readers, have decided on the adoption of a plan which they trust will obviate any inconvenience occasioned to subscribers by the present mode of issuing the weekly numbers. The work will be printed every Tuesday, as heretofore; and, on the 1st of each month, commencing with June next, the numbers of the preceding month will be published together. They will be stitched in a neatly-printed cover containing the table of contents, medical advertisements, &c., and will be promptly forwarded to those individuals who may prefer receiving them in this manner. The Monthly Series will be designated by the title of PARTS, and each Part will of course comprise sometimes four and sometimes five NUMBERS. It is thought that by this measure subscribers at a distance will receive the Journal with more certainty, and in better condition, than when one sheet only is enclosed in an envelop. The Contents on the covers may also be found convenient to readers in referring to articles in previous numbers,—and the covers themselves will better preserve the work in good order, in the daily use for which it is intended.

Another improvement is in contemplation, which the publishers believe will meet the approbation of the patrons of the Medical Journal. In consequence of the inconvenient size of a volume containing 52 numbers, or 832 pages, it is intended that in future there shall be two volumes a year. A title page and index will therefore be issued, and a new volume commenced, next August, and at the close of every six months following.

Additional expense will thus be incurred by the proprietors, but the subscription price for the work, either weekly or monthly, will be the same as at present.

The proposed plan of Monthly Parts will be adopted for the remainder of this

volume, or until August next; and if it is then found that a Monthly Medical Journal on a more extended and systematic plan is required, such an one will be published. It is the desire of the publishers to supply the wants, in Medical Periodical Literature, of the Faculty of New England,—and if they require a monthly publication either partly made up from the weekly Medical Journal, or altogether distinct from it, they have only to signify their wishes to us, and offer a reasonable encouragement, and they shall be gratified. Should the measure now to be adopted, however, prove likely to be more generally satisfactory than the one last proposed, it will be continued.

Those subscribers who wish the Journal sent them in future in *Monthly Parts*, as above explained, are requested to return this number, directed "*Medical and Surgical Journal, Boston,*" *with their names written on the margin*; and, as soon as practicable after it is received, the alteration will be made. No number after this, therefore, need be sent back in any case, and care will be taken by the publishers that this one is again forwarded to all who return it as above. Those who do not give notice in this or in some other manner, will receive the weekly numbers as printed.

The publishers would be glad to receive the opinions of readers in different parts of the country, as soon as favorable opportunities occur, in regard to the above alterations and suggestions. They would also give notice to members of the profession, that the pages of the Journal are open for the discussion of subjects relating to Medicine and Surgery and the kindred Sciences, for Reports of Cases, &c. &c. The editorial department is confided to able and impartial hands, and no influence whatever but that of an earnest desire that the Journal shall conduce to the promotion of Science, is allowed to operate in the admission or rejection of communications.